REMARKS:

Status of Claims

Claims 1-11 and 15-16 were previously pending. By way of this Amendment, claims 1 and 15 are amended and claims 19-24 are newly added. Thus, claims 1-11, 15-16, and 19-24 are currently pending with claims 1, 15, and 19 being independent.

Summary of Office Action

In the May 18, 2006, Office action the Examiner rejected claim 11 under 35 U.S.C. § 112, ¶ 2, rejected claims 1-5, 9-10, and 15-16 under 35 U.S.C. § 102(e) as being anticipated by Ostromoukhov (U.S. Patent No. 6,198,545), and objected to claims 6-8 and 11.

Interview Summary

On August 16, 2006, Applicant's representative held a telephone interview with Examiner Brinich. Applicant and his representative wish to thank the Examiner for his courteous and professional demeanor during the interview. During the interview, the relevance of Ostromoukhov to claims 1 and 11 was discussed. In particular, the differences between halftone dot methods – as utilized by embodiments of the present invention – and artistic screening methods – as utilized by Ostromoukhov – were discussed. No agreement was reached regarding the claims although the remarks and amendments made herein reflect suggestions made by the Examiner during the interview.

Rejection under 35 U.S.C. § 112, ¶ 2

Claim 1 is amended herein to recite a "first" spot cell. Thus, there should no longer be any confusion regarding the "first spot cell" recited in claim 11 and the Examiner's rejection under 35 U.S.C. § 112 is respectfully traversed.

Rejections under 35 U.S.C. § 102(e)

As discussed at length during the interview, the claimed embodiments of the present invention are directed at halftone "dot" methods while the disclosure of Ostromoukhov is entirely directed at halftone "artistic screening" methods. As evidenced by the materials submitted in the August 4, 2006, IDS, those skilled in the art – including Ostromoukhov himself – recognize that halftone dot methods and artistic screening methods are entirely different ways of producing halftone images.

In particular, the Ostromoukhov '545 patent, the reference cited by the Examiner, expressly states that "[t]he disclosed method . . . does not make use of dither thresholds" (col. 2, ll. 34-38). As known in the art, dither thresholds employ spot algorithms (including spot functions) to assign illumination values (dither threshold values) for halftone dots or spot cells. The correlation between dither thresholds and spot algorithms is discussed at length in Ostromoukhov's 1995 article on artistic screening, which was submitted in the August 4, 2006, IDS.

All independent claims of the present application now generally recite "assigning pixel illumination ranking values corresponding to the plurality of pixels using a spot algorithm to create

a first spot cell for a custom halftone dot." Support for this addition to the claims is found at least at page 11, line 6, through page 14, line 24. The recited "spot algorithm" may include any spot algorithms or functions, including but not limited to the Adobe® PostScript spot function discussed on page 11. Further, as should be appreciated by those skilled in the art, the recited "spot algorithm" is not limited to software implemented algorithms as the claimed invention may be embodied entirely in hardware.

In contrast to the claimed spot algorithm, Ostromoukhov employs contour-based screen elements to achieve various artistic screening effects. Specifically, Ostromoukhov uses evolving contour-based screen elements made up of a sequence of curve segments defined by Bezier polynomials (col. 6, ll. 46-52; col. 7, ll. 52-53). The use of Bezier polynomials allows as a non-uniform grid to be used for placement of the screen elements as shown in FIG. 14. Ostromoukhov's contour-based screen elements are not halftone dots and are not formed by assigning pixel illumination values with a spot algorithm – Ostromoukhov expressly disclaims use of dither thresholds and spot algorithms as discussed above. The differences between the claimed embodiments of the present invention and Ostromoukhov are highlighted by the below figures:

Custom Route 76 Dot
0% --> 100% Density, 10 lines per inch, 45° Dot Draw Angle
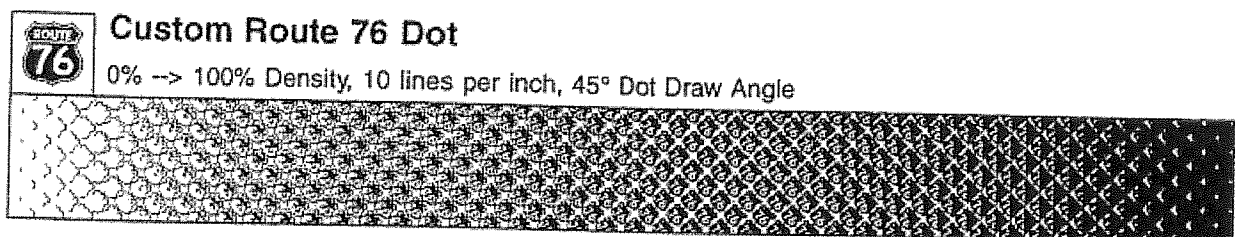
FIG. 3 (Present application — halftone dots)
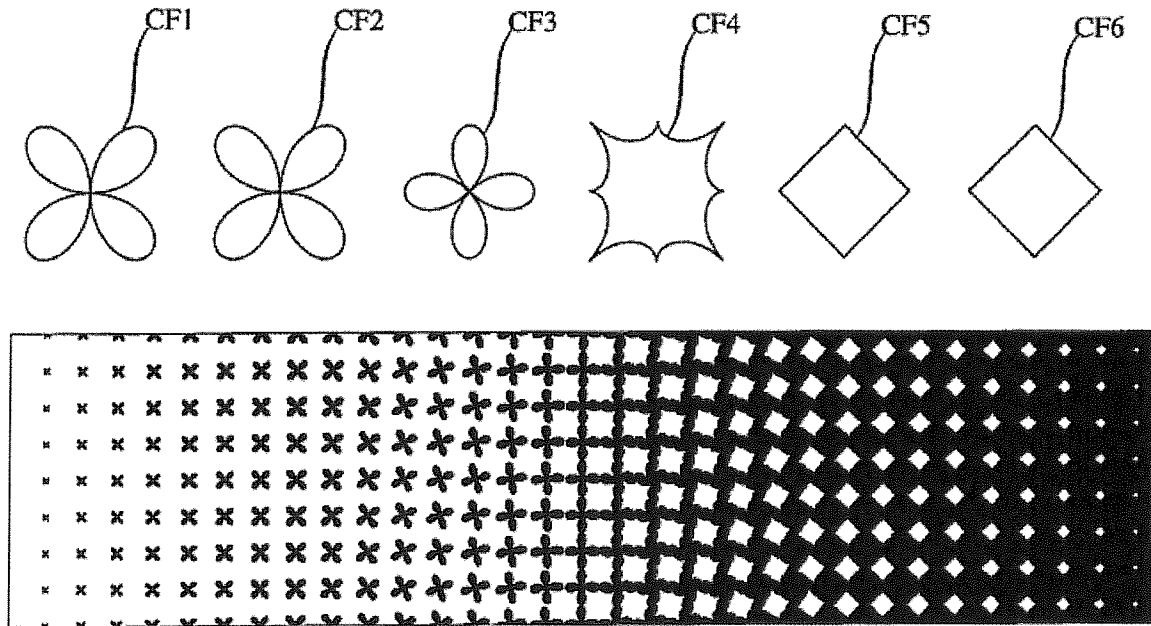
Ostromoukhov (FIG. 10 — evolving contours)

As clearly shown in FIG. 10, Ostromoukhov does not form screen elements using a spot algorithm as it instead progressively modifies the curves of the screen elements to change the relative amounts of black and white within the screen element.

Consequently, Ostromoukhov does not disclose or suggest the use of a spot algorithm as now recited in all independent claims. Further, no suggestion or motivation exists to modify Ostromoukhov to use spot algorithms as Ostromoukhov expressly teaches that use of its disclosed method in combination with dither thresholds – and thus spot algorithms and functions – is undesirable (col. 2, ll. 34-38; col. 3, ll.. 40-43).
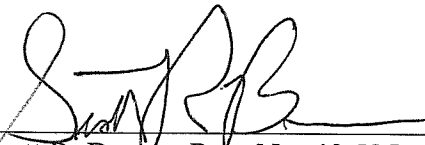
Applicant believes all pending claims of the present application are now in condition for

allowance and such allowance is respectfully requested. Should the Examiner have any questions,

please contact the undersigned at (800) 445-3460.

The Commissioner is hereby authorized to charge any additional fees associated with this

communication or credit any overpayment to Deposit Account No. 19-0522.

Respectfully submitted,

HOVEY WILLIAMS LLP

By _____

Scott R. Brown, Reg. No. 40,535
2405 Grand Boulevard, Suite 400
Kansas City, Missouri 64108
816/474-9050

ATTORNEYS FOR APPLICANT(S)

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